

- Longyear, B. O.** New Species of Michigan Fungi. Rep. Mich. Acad. of Sci. 1901: 57-59. 1902. Describes two new species.
- Morgan, A. P.** The Mycologic Flora of the Miami Valley, Ohio. Jour. Cinn. Soc. Nat. Hist. 6: 182-185. 1883.
- Murrill, W. A.** Terms Applied to the Surface and Surface Appendages of Fungi. Torrey 5: 61-66. 1905.
- McIlvaine, C., & MacAdam, R. K.** One Thousand American Fungi. 161-184. 1902.
- Peck, C. H.** Rep. N. Y. State Bot. 1884: 111-133. 1885; 1887: 74. 1888; 1889: 19, 20. 1890; 1890: 71, 72. 1891; 1901: 949. 1902; 1902: 43-45. 1903; 1903: 18, 19. 1904; 1904: 33. 1905; 1905: 37. 1906. Bull. Torrey Club 25: 369. 1898; 32: 78. 1901. Describes thirty-two new species and four new varieties.
- Saccardo, P. A.** Sylloge Fungorum 5: 423-453. 1887; 9: 56-58. 1891; 11: 31, 32. 1895; 14: 94, 95. 1899; 16: 43-46. 1902; 17: 29, 30. 1905.
- NEW YORK BOTANICAL GARDEN.

ADDITIONS TO THE TREE FLORA OF THE UNITED STATES

BY J. K. SMALL

In a previous paper * I recorded the discovery of six trees new to the flora of the United States. Four of the species there mentioned, namely *Quercus Rolfsii* Small, *Ilex Krugiana* Loesener, *Rhus leucantha* Jacq., and *Tetrazygia bicolor* (Mill.) Cogn., are indigenous to Florida, while two species, *Mangifera indica* L., and *Sapota Zapotilla* (Jacq.) Coville (*Achras Sapota* L.) are naturalized plants.

Further exploration in South Florida has revealed six additional arboreous plants, which are as follows:

SERENOA SERRULATA (Michx.) Hook. As far as we are aware, throughout the range of this species in North Carolina, South Carolina, Georgia, and northern Florida, the stem never rises above the surface of the ground. In South Florida, under quite similar conditions, the stem not uncommonly stands erect or

* Additions to the Flora of Subtropical Florida. Bull. N. Y. Bot. Gard. 3: 419-440. 1905.

nearly so, although more commonly it is horizontal as in the case of the plants growing further north. On the dunes back of the beach opposite Miami, plants with erect stems ten to twelve feet tall are quite common. There is a small grove in the pine-lands north of Arch Creek on the mainland seven or eight miles north of Miami, consisting of taller plants, the stems of some measuring twenty-six feet in height. The upright plants have no floral characters to separate them from the horizontal-stemmed ones, but the foliage is usually more glaucous. I have not yet been able to discover the reason for the plants assuming the two distinct habits, for both the erect and horizontal-stemmed forms occur in close proximity, growing both in deep sand or on almost bare coral rock.

CHRYSOBALANUS PELLOCARPUS Mey. This species as it occurs in Florida is strongly contrasted with *Chrysobalanus Icaco* L. The plants of the latter species are mainly confined to the sand dunes near the beach and the contiguous regions. In the everglades it is apparently replaced by *Chrysobalanus pellocarpus* Mey. This species differs from *C. Icaco* in its smaller, narrower, usually abruptly pointed or rounded leaf-blades, the smaller flowers with typically spatulate petals, and the obovoid or oblong-obovoid drupes with narrow sharp-ridged stones.

ALVARADOA AMORPHOIDES Liebm. The discovery of this tropical plant in Florida has already been recorded* but hitherto it was known within our limits only as a shrub. In the hammocks near the trail that crosses Long Prairie a few miles northeast of Camp Longview small trees varying between twenty and thirty feet in height are not uncommon. It attains about the same development as *Tetrazygia bicolor*, with which it grows.

SURIANA MARITIMA L. The greatest height to which this sea-shore plant was formerly known to attain seems to have been about six feet. I have seen it growing at many places on the coast of South Florida and with the exception of the instance to be mentioned the specimens were invariably less than six feet tall. However, in the fall of 1904, I discovered it growing as a tree on the western shore of Elliott's Key at a point about twenty-

* Bull. N. Y. Bot. Gard. 3: 424. 1895.

five miles south of Miami. There the plants grew along the shore for a distance of about one hundred feet, the larger ones attaining a height of about thirty feet with a maximum trunk-diameter of fully one foot.

SOLANUM VERBASCIFOLIUM L. This species of *Solanum* occurs as a tree both on the mainland of southern peninsular Florida and on the Keys. In the hammocks throughout the homestead country southwest of Cutler, plants of this species are not uncommon and they sometimes grow to a height of between twenty-five and thirty feet with a trunk-diameter varying from six to eight inches. On the Keys, for example on the western side of Elliott's Key, the plants reach about the same proportions, assuming however a somewhat more stocky habit, being not quite so tall but with a greater trunk-diameter.

GENIPA CLUSIFOLIA (Jacq.) Griseb. In the hammocks near the coast the plants of this species are usually irregularly branched shrubs. On the dunes along the seashore they commonly occur as diminutive trees varying from two to six feet in height. Their habit there resembles that assumed by *Terminalia Catappa*, that is, with the branches whorled in several tiers. In a hammock on the dune several miles south of Fort Lauderdale I have found many plants as fully developed trees, some of the trunks measuring over one foot in diameter.

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SHORTER NOTES

A NEW SPRUCE FROM THE CANADIAN ROCKY MOUNTAINS. — In a landscape in the Canadian Rocky Mountains in Alberta or British Columbia, probably the most striking feature is the slender spruces, which at the lower altitudes in the wet grounds and river bottoms are frequently found growing to the exclusion of all other trees. The species has been referred by authors to both *Picea canadensis* (Mill.) B. S. P. and *P. Mariana* (Mill.) B. S. P., to both of which it bears a certain resemblance, but from two months' experience with the tree during the past season, in the region from Banff, Alberta, to Field, B. C., I am satisfied that it is quite distinct from either, and therefore propose for it the following name: